



# Enchanting, Evoking, and Affecting: The Invisible Work of Technology Implementation in Homecare<sup>1</sup>

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## ABSTRACT

New technologies are implemented in health care with the promises of replacing care work, but implementing technology into care also requires a lot of work. On the basis of ethnographic fieldwork in a Danish homecare unit, this paper explores a phenomenon increasingly pervading the work of health care personnel in the Nordic countries and other welfare states around the world; the implementation of technology in health and elder care. The paper asks what work is involved in making new technologies enter health and elder care. Drawing on STS research on technology implementation, the paper analyses the invisible work of technology implementation, a complex process that involves skilled affective, symbolic, and evocative practices such as enchanting, affecting, and evoking certain imaginaries and beliefs. What is being implemented along these processes, the paper argues is not only technology, but also new municipal and home care workers reconfigured as 'implementation agents', and 'digital older citizens'.

## KEYWORDS

*implementation agents / invisible work / welfare technology / enchantment*

## Introduction

National welfare states and systems around the globe, in Europe and the Nordic countries in particular, are currently seeking to reinvent themselves. Austerity policies, welfare reforms, and calls for health care innovation frame the need and means for developing new and more sustainable ways of delivering welfare and care to the citizens. Technology often figures as a promising means and solution. Researchers of technology in health care describe this situation as an international trend, where technology figures as solution to the impending 'care crisis' (Moser, Thygesen 2015). In Denmark, national policies on aging and elder care highlight so-called welfare technology as a promising solution to secure the delivery of care for the increasing number of older people, while saving public expenditures on care provision (Regeringen, KL & Danske regioner 2013 [The Danish Government, Local Government Denmark & Danish Regions 2013]) (See also Ertner 2015). The term welfare technology refers to technologies that provide or assist the user in receiving public welfare services such as care. The hope persists that technologies may come to replace human labor in care work and expectations to the value and benefits of technologies are high. But despite what some researchers have identified as the 'hope and hype' (Himmelstein & Woolhandler 2005; Kellermann & Jones 2013) of health care technologies, such as electronic medical records, these systems often

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fail to deliver the promised effects in practice (Ibid). In Denmark, great effort is invested in developing national strategies to speed up the uptake of welfare technology in Danish municipalities (KL 2017 [Local Government Denmark 2017]). Many municipalities experience that barriers occur when projects move from test phase to implementation (Ibid, p. 3). This has brought about a focus on developing central strategies for implementation, documentation, and coordination of such activities. The idea is that if the barriers are overcome and welfare technology is successfully implemented, great gains await on the other side. Sánchez-Criado et al. (Sánchez-Criado et al. 2014) refer to this imaginary about technology implementation as the quick and harmless placement of technology into peoples homes as a ‘plug-n-play’ approach. Plug-n-play approaches are often at play in managerial and policy discourses and assume a user who ‘want to be supported in their independent living at home [the users] only need to ask for it, and the quick and harmless placement of such devices in their homes will immediately enhance their quality of life’. Such ideas present implementation as a technical process, and an innocent, nonobtrusive, and banal procedure, despite the vast amount of literature on and experiences from practice of multiple barriers and forms of resistance toward welfare technology in health care (Nilsen et al. 2016). In this paper, the concern is not with the promises of technology or the effects of their implementation as such. Rather, the interest is on the process of implementation and the kind of work carried out by care workers and municipal employees to implement technologies in older peoples homes. The paper aims to explore what implementation is if studied in practice, by looking at what labour is carried out by the people doing implementation in health care. The theoretical inspiration stems from a relatively small body of STS research, which has focused on the process of technology implementation, and described it as a highly complex, heterogeneous, and vulnerable process, where many actors, social and material, have to come together, in order for a new technology to work. As opposed to the system-oriented view that often prevail in common sense and policy discourse, implementation has been foregrounded by STS research as a technical, social, and organizational process through and through (Berg 2001). Analyzing ethnographic fieldwork from a local home care unit in Denmark, the paper seeks to illuminate the work involved in doing technology implementation in health care practice. Following home care workers and project managers in their work of implementing technologies, made visible the importance of work that has to do with creating belief, rewarding, and persuading. In this paper, that work is referred to as the symbolic, affective, and evocative work of technological innovation. It is work that is predominant in practice, it is unarticulated, but carried out more or less systematically, in skilled ways, and with vital effects on the implementation process and results. That kind of work is usually invisible in process descriptions, policy strategies, and innovation models. This paper draws on STS research on technology implementation, and particularly the concept of invisible work introduced by Star & Strauss (Star & Strauss 1999), to describe the type and character of work that these actors engage in in order to implement technologies.

## Implementation and Invisibility

Star and Strauss introduced the concept of invisible work, which refers to the neglect of knowledge, skills, and work practices not formally represented as work. They argue

that what counts as work in a given context shapes the visibility and invisibility of certain expertise and groups of actors. The concept of invisibility has been an invaluable resource to studies of computer-supported cooperative work (CSCW), and technology studies in general, and it has also been an influential concept in STS studies of implementation. In contrast to common views on the implementation process, STS researchers have analyzed implementation as a process of mutual shaping (Aarts et al. 2004; Berg 2001; Oudshoorn 2008), co-shaping or co-production (Pols & Willems 2011; Sánchez-Criado et al. 2014), and as infrastructuring (Heath et al. 2003; Svendsen & Jespersen 2017). Berg's famous paper from 2001 deflated common myths about implementation as a purely technical process. Showing how the implementation of a patient care information system involved transformations of both the system itself and the organization into which it was implemented, lead him to argue for a view on implementation as technical, social, and organizational process. Since then, other researchers have sought to illuminate the work, skills, and processes that are rendered absent, invisible, and obscured by discourses that articulate implementation as the dissemination of a singular object to an equally singular and detached environment of users and practices. Oudshoorn (2008) analyzes the invisible work involved in making patients users of telemonitoring applications. Studying the work and skills required from patients and physicians, she identifies articulation work, affective work, and inclusion work as central to operating the system. Patients were turned into 'diagnostic agents' who re-delegated part of the responsibility of diagnosis to them instead of the physicians. As diagnostic agents, patients carried out a range of different types of 'articulation work'; work that 'gets things back "on track" in the face of the unexpected, and modifies action to accommodate unanticipated contingencies' (from Strauss 2018 in Oudshoorn 2008), such as catching the right moment to register and record an electrocardiogram that shows their heart rate dysfunction. The physicians in turn had to perform different types of work of comforting and reassuring patients about their abilities to master the new technology – invisible work that Oudshoorn characterizes as 'inclusion work' and affective work. Pols and Willems refer to such processes of re-configuration as tinkering (Pols & Willems 2011). In their study of telecare implementation, they analyze how implementing the particular technology, webcams, in a rehabilitation clinic involved the double processes of *taming* and *unleashing*. The technology had to be 'tamed', tinkered with and adapted to the practices of the users. But the technology was not only tamed, it was also unleashed in the sense that it affected care practice and created new kinds of controversies. The *taming* and *unleashing* of technology can be seen as processes that are rendered invisible by grandiose promises of innovation discourses that conceal the situated complexity and efforts of tinkering with technology, which is required to make it work. These studies all point to the importance of attending to *work*, what is *actually* done by various actors in order to make a given technological system function. They seek to render visible the impurities, complexities, and heterogeneity that are being erased by singularizing innovation discourses. This paper aligns with these approaches, as it explores the invisible work of implementing technology in home care. It adds to this research by illuminating the symbolic, affective, and persuasive aspects of implementation of care technologies in home care. The paper starts out with questions about what kind of work comprises the project of implementation in homecare? Who does the work, and with what purposes? The aim is to develop an understanding of the *type* and *character* of work involved in technological implementation in homecare. The paper draws on ethnographic studies

from a homecare unit, where a special group of resource persons was assembled, a group of homecare workers with special IT training and tasks. The analyses follow both the home care workers' efforts to implement technologies in the homes of older people, and the activities of project managers of training and preparing the home care workers to take on the tasks of implementation. As such, the analyses both describe implementation as the work of 'installing' technology in the homes of older expected users, and as the efforts of project managers of creating 'implementation agents'. Doing that, the paper explores how homecare workers do implementation, and how project managers seek to develop 'good implementers' – what skills and attitudes are required to become a good 'implementation agent'? The paper begins with an introduction of the case study and the methodology. The following analysis of the empirical material is separated into two parts: the work of project managers of creating 'implementation agents' and the work of home care workers of implementing technologies in the homes of older people. The concluding discussion elaborates on the analytical findings and develops the notions of symbolic reward, enchantment, and persuasion as central aspects of implementation work. It also suggests the figure of 'implementation agent' as central to implementation processes, and calls for more studies into the re-configuration of care workers as 'implementation agents' as a way to understand processes and implications of technological innovations in health care.

## Technology implementation in homecare: Case and method

The paper analyzes empirical material from an ethnographic study conducted in a homecare unit in a Danish municipality. For ethical purposes, all names of people and locations have been anonymized in order to secure the anonymity of all people involved in the study. In the particular municipality, where the study is conducted, local politicians had funded a project aimed at supporting older people in an age of digitization. This project was called 'digital ageing' (anonymized), and it followed the lines of local policy programs seeking to increase and speed up the uptake of technologies in health care. In Denmark and the Nordic countries, such technologies are referred to as welfare technologies. They are increasingly being implemented in all areas of the public sector with the aim of developing and making the provision of welfare services more efficient (La Cour & Waldorff 2017). The project 'digital ageing' was run by two project managers employed in the municipality. The project had a double purpose in the sense that it aimed at implementing more welfare technologies in home care and in older people's homes, and to develop ways and models for implementation that were both efficient and made the older citizens feel safe using technology. Implementation was both a means and an end in itself, since the implementation of technology was not only a matter of getting technologies out in practice, but of 'implementing implementation' conjointly with those activities. The project started in 2014 and ran until summer 2018. A group of around 15 homecare workers were recruited from different homecare units by the project managers to take on the special tasks of implementing new technologies and participating in project events. This group was called the IT resource persons. They were assembled for group meetings every third month, and received special training in the task of technology implementation. The technologies that were introduced ranged from digital applications such as different online shopping services and e-books (the

public digital mail platform in Denmark), self-wash toilets, and Ipads. During the time of the ethnographic study, the project worked mainly with washing toilets and Ipads. Other technologies and digital services were planned and expected to enter home care in the future. This paper focuses mainly on the implementation of Ipads. The empirical material was created through a combination of ethnographic observations, informal conversations/interviews with the older citizen, the care workers and project managers, and focus groups with care workers. The ethnographer/author participated in project meetings, both as an observer and an active participant giving presentations and sharing insights from the ongoing studies. She followed home care workers on their visits in older peoples' homes and conducted focus groups. For the washing toilet, the implementation task consisted in two visits: a pre-visitation visit, where a resource person went out to the citizen to measure the size of the bathroom and conduct an interview in order to decide whether or not the person was a good candidate for the technology. The second visit followed after the toilet had been installed, where a resource person would come to evaluate the citizens' perceptions and effects of using the new toilet through an interview following a standard survey. For the implementation of Ipads, five visits of an hour each were dedicated to citizens who had borrowed an Ipad on the local library. The resource person would introduce the functionality of the Ipad to the citizen and teach them how to use it. It was the expectation of the project managers that when the project is terminated, the homecare unit would manage and coordinate all activities related to technology implementation on their own.

The empirical material consists of nine home care visits, three informal interviews with older citizens in their homes, participation in three project meetings, and three focus groups with seven resource persons in total. Besides this, the ethnographer had informal conversations with both the project managers and the resource persons throughout the study, and fieldnotes were used to document these conversations. Project meetings and focus groups were recorded with a dictaphone. The data were analyzed through a grounded theory approach (Glaser & Strauss 1967). Because of the format of the study, that the ethnographer had to wait to be invited by homecare workers for each visit, and often got the invitation with very short notice, it was not possible to follow as many cases as had been the ideal. This meant that it was not possible to follow the progress throughout a whole duration from the first to the last visit. Therefore, it is not possible to say anything about how relations between resource persons, users, and technology changes over time, but only how their relations are re-configured in particular here-nows. However, this is not necessarily a disadvantage to the aims of the study, since the purpose is not to generalize across a wide range of cases and over many different situations spread in time, but exactly to specify the character of the work of implementing technology based on situated analyses of how this is performed in particular situations.

## **Making 'implementation agents' out of homecare workers**

There are two project managers in the project, and they organize meetings, training events, and make sure that the project is going in the right direction. An important aim of their work is to make sure that the care workers who have been recruited as special resource persons in implementation tasks become 'good' implementers. In other words, the project managers' main objective is to create 'implementation agents' out of the

homecare workers. The following analysis explores how project managers worked to create ‘implementation agents’; what the necessary skills and characters of such ‘implementation agents’ and how did the project managers work to make them live up to those requirements?

### Symbolic reward: Pampering and enacting appreciation

Being part of the resource team involves participating in project meetings, education and training in technology, and taking on tasks related to technology. Engaging in these activities is part of the visible work of creating a special resource team. However, making the resource persons fulfill this role requires other means of education, too. While knowing how to use an Ipad is a crucial aspect of implementing it, a resource person must possess a range of other skills and qualities too. Importantly, as one of the project managers express, a central quality is the motivation to put an extra effort, which is not included in their salary

They put a big effort and they come up here for meetings and all, so they need to be pampered a little. (project manager)

In the training of resource persons, project managers seek to create attachment to the project via other means than through salary; pampering and special treats is part of the program of making resource persons that have the right attitude and motivation. In order to create a sense of attachment to the project and its aims, the project managers seek to reinforce the team members’ individual motivation and personal engagement. The project has a time limit, and after that has passed it is the idea, that the team will be able to manage implementation without involvement of the project managers. In their everyday work life, the resource persons have many other tasks than implementing technology, in fact implementation is only a small part of their work, but it is the expectation that there will be more and more of those tasks as more technologies enter home care. The project managers seek to install this special, personal attitude through forms of symbolic reward. The delegation of a personal Ipad to all project members is a very concrete way in which the resource persons are being rewarded, and it is necessary in order for the resource persons to be able to practice using an Ipad. The project managers know that the resource person’s emotional attachment to the project is key to its success, and thus they exercise various forms of symbolic reward. One example is the tradition of starting all project meetings with a project financed lunch in the reception house followed by coffee and cake. One of the project managers comment

They deserve to be pampered after everything that they do in this project. We cannot give them a salary increment unfortunately, but then we try to pay them back in other ways, with food and such. (Project manager)

Pampering the resource persons is a way of showing appreciation for their efforts and sustaining their emotional attachment to the project. All project meetings take place in the local communal house, away from the home care centers, and always start out with a collective lunch in the café. After lunch the meeting starts, and in the break coffee and

cake is served in the hall. The presentation is impressive; a buffet of beautiful and delicious dishes, free selection of beverages, and the beautiful cakes decorated with tropical fruits and berries. This, apparently is part of the ‘pampering’ of the resource persons. The project managers also reward the resource persons in more subtle ways, by expressing appreciation and praise for their work in the project in emails and on meetings. On several occasions, the project managers emphasize that the resource persons are doing ‘a damn good job’. Following all, project meetings is an informal evaluation of the project and the resource persons efforts invested in it. This is usually framed as a praise of their work and results and an emphasis on the importance of continuing the good work. Showing appreciation through different types of symbolic reward is a way in which the project managers continuously seek to reinforce the resource persons motivation for the project.

### **Enchantment: Creating belief and fascination**

The project managers are weary that implementing welfare technology will fade out of the resource persons priorities when the project ends and the project managers are no longer there to emphasize the necessity of prioritizing it. In an informal talk about the project, one of the project managers say ‘I just really hope that they will find it important enough to keep giving it real priority’. Creating a sense of importance for the resource persons is necessary in order to make them perform well even after the project ends. In order to create that attitude of dedication, certain beliefs and mindsets need to be in place.

On several occasions during project meetings, the project managers refer to the future as a way of stressing the importance of the focus on technology implementation.

There is no doubt that there is only going to come more of these types of technologies, so it is so important that we are prepared. (Project manager)

One of the project managers emphasizes this particular future where home care work is dominated by a vast amount of technologies. The imaginary of homecare as being overflowed with technologies and the necessity of home care workers to prepare for that situation plays a central role in framing the importance of the project. Training resource persons not only has to do with teaching them to operate actual technologies but also to orient toward a future of still unknown technologies. The technological imaginary is not only mobilized on project meetings but also on a special activity, where one project meeting is being exchanged for a field trip. The project managers have arranged a day out, where the resource persons get to play with Virtual Reality (VR) technologies and hear presentations about the application of VR to actual and imagined future purposes. Included in the meeting is a lunch in a restaurant before the event, and drinks in a café afterwards. One resource persons reflects upon the event during a focus group interview:

It was so cool, we got to try these glasses and I went to a warzone in Syria, it was really intense. Children in Denmark could really learn from that when they complain about how bad they have it (laughs). There were many ways in which this have been used, and can be used. For instance there was something about fear of getting injected, the guy told us that

it had been used on patients who could then see something nice and be more relaxed and pain-relieved when they had blood samples taken. There are many ways in which it could be used for elderly also ... yeah it was really cool. (Resource person)

The resource person tells about the activity and expresses great fascination with the technology by emphasizing the experience of using the VR glasses as both ‘cool’ and ‘fun’. All though the activity had no explicit link to eldercare, her fascination with the technology is transferred to the relevance for eldercare, when she reflects upon the many potential applications of VR in her work. The activity has a double purpose; to pamper the resource persons with a special treat and an afternoon exempt from their normal tasks, and to reinforce the imaginary about and fascination with the future technological revolution in homecare, and the necessity of being prepared and ready for it. When asked about the meaningfulness of being involved in the project, many of the resource persons refer to the future, and the greater purpose of being prepared for a technological future, as an important meaning for them.

There is no doubt that is the way we are headed, there’s no way to stop that development, and there is no reason to, because it is really amazing. (Resource person)

The generations that will come, they are going to demand more, right. The ones we have now at 80–90 years old, they are perhaps not so interested, but the new ones are used to using mobile phones and that stuff right. And we are actually hopelessly behind when it comes to technology and welfare technology. (Resource person)

For the resource persons, there is a sense of necessity and fascination tied to the task of implementing new technologies. Even though one resource person expresses that he does not think that the project has a great relevance for the elderly today, the project sustains its relevance and necessity in relation to the imaginary about future elderly, and the notion of a technological development where you are either keeping up with progress or left behind. The fascination with technology and the incentive to ‘keep up’ with developments elsewhere becomes a motivation factor in its own right. It is this sense of fascination and necessity that the project seeks to sustain by referring to the future and the greater purpose, through articulating it continuously on project meetings and by going on fieldtrips to explore VR technology. Creating resource persons implies creating affective attachments to both technology and the promises of technology, which involves evoking fascination and imaginaries of technologies and care.

## Creating digital older citizens

Implementing technology requires resource persons with certain skills and attitudes, but it also requires older citizens who are willing to use digital technology. Educating older people in technology is the task associated with implementing technology, but what kind of work must the resource persons do to make the older citizens become ‘digital’? In the simplest version, implementation refers to the technical installation of a new object. Following this project made it clear that making older people become users of care technology requires a lot of work that moves far beyond installation of technology in their



homes. The following analyses explore what it took to make these older persons become users of welfare technology.

## Articulation and affective work

'Is it me driving it around, or is it driving me around?' (Older citizen using Ipad)

A woman of 73 years, Katinka, is having her second meeting with the resource person, Nete, one of the resource persons, teaching her to use the Ipad that she borrowed on the library. Katinka explains that people have been telling her about the many things you can do with an Ipad, and she is curious to see if it could be useful for her. But she is doubtful if she has the ability to learn how to use it. The following are excerpts from fieldnotes:

Katinkas fingers press a button on the screen, it does not react ('try again', Nete encourages her), eagerly she presses the finger hard and long on the screen, but again the app does not react 'This is very normal, I think it has something to do with older peoples fingers that have thicker skin, try tapping again, a bit more quickly instead of pressing really hard' she says with a mild voice), Katinkas shaky finger hits the screen in a wrong place and a new screen view opens up ('Oops, just go back, that can happen. Don't be scared to do anything wrong, you cannot do anything wrong, and you can always just go back by pressing the button HOME'). Katinka looks confused, but tries a couple times more to press the icon and finally it opens ('Well done!' Nete says). Katinka is laughing 'I'm afraid it is still it driving me around', Nete responds 'well, but you have already come far since our last meeting I think, it is going ahead, just keep practicing'

The resource person is guiding Katinka in using the Ipad by talking her through the different maneuvers, encouraging her to go on, and convincing her that she can learn it. When Katinka encounters difficulties and fail to navigate the Ipad as she intended, the resource person banalizes the error by saying 'it happens', and comforts her by saying that she can do nothing wrong. The resource person is encouraging Katinka through positive comments and by expressing approval of her progress. These verbal practices of reassuring, approving, and comforting are what Oudshoorn refer to as 'articulation work' (Oudshoorn 2008, drawing on Star & Strauss 1999) and 'affective work'. It acts as a lubricant on the process, and secures that the older person gets through and overcomes the difficulties of using the new technology with confidence and a feeling of optimism and belief that she can learn to use it. This kind of work is often crucial for the successful implementation of the Ipads, which the resource persons recognize as a profoundly emotional process.

During a focus group, one of the resource persons tells a story that still haunts her, where she did not succeed in making one of her citizens like Ipads.

Once I came in the house of a lady, she said to me 'Tabitha, I hate this Ipad. I had it as a Christmas present and I suppose I should use it, but I really hate it!' I said 'You know what, let me teach you how to use it', and we started the process, and I really tried, but in the end, she didn't want to use it. That was such a pity. She just didn't like it. Of course I

think if I could have done it differently, presented it in a more appetizing way ... I don't know (resource person)

Teaching older persons to use Ipad, require that the technology appear 'appetizing' to them, and this, to some degree, depends on the resource person's ability to perform it in ways that appeal to the specific person in the specific situation. The resource person needs to attend to emotions related to technology, make the older person like the technology, feel safe using it. Sometimes these emotions can be very strong; here, the resource person tells about a person who claimed to hate her Ipad. Making her stop hating it and develop more positive feelings is ultimately the resource persons job. But emotions are also invested by the resource person herself. In this particular situation, despite hard efforts, the resource person did not succeed in making the woman like her Ipad. She explains feeling that it was 'such a pity', and wonders if she could have done more to make the Ipad appear appetizing. The resource persons must not only teach, and make the older persons believe they can learn to use technology, but they also need to evoke positive feelings for the technology.

### **Reconfiguring technology and user needs: Enchantment and persuasion**

Making technology appear 'appetizing' as a resource person put it in the previous section, is part of what is here referred to as enchantment. Ressource persons describe feelings of amazement and 'a whole new world opening up', when they succeed to convince an older person of the possibilities and potentials of the technology.

Teaching in using an Ipad that's like a wide concept, right, ... Because you need to know that person, what they like, do they have family and so on. Once for example I helped a woman set up a dating profile. She wanted to find a boyfriend, and I said that she could do that on the ipad, and then she wanted to try it. Another time I was teaching a woman who didn't believe that Ipad was for her. She was into flowers and gardening, and when I showed her how she could use the internet to search for flowers she was like 'oh my'. A whole new world opened up to her. It was amazing. (Resource person)

Experiencing the 'opening up' of a new world of IT for elderly people is what the resource persons aim to achieve. But, as she reflects, teaching in using an Ipad is a wide concept, what needs to be taught, how to present the ipad, which possibilities to feature depend on the particular person. In order to do that, they need to gain knowledge about the person in front of them, sometimes personal and intimate knowledge, and they need to present the technology in ways that match with the elderly person's interests and needs. Evoking the Ipad vis a vis the interests of the older person, as a dating tool or a portal for flower enthusiasts, is a crucial part of implementation. The resource person seeks to enchant the older person through evoking the technology as an enchanted device that promises to fulfill their deepest desires, as a flower portal or a possibility for finding love. If the enchantment succeeds, this results in strong emotional responses of amazement from both the resource person and the new user. If, on the other hand, they

fail in evoking the Ipad as enchanted device, the chances that the users will find it useful diminish, in which case implementation fails to happen.

In other situations, more persuasive ways of creating attachment between the technology and the older person are practiced. Some older people who get help for grocery shopping, and who have a computer or Ipad in the home, are encouraged to learn how to shop online. One major barrier for this to happen is that most online vendors have a minimum price at 400 or 500 dkr per delivery, which for some people is too much. Many resource persons express frustration with this barrier, which on many occasions has the consequence that otherwise motivated people decide not to use the service. Some resource persons try to find ways of readapting the older persons shopping routines to the requirements of the service.

We had already set up her profile and started shopping, but then at the last meeting when we were ready to make a real order, we found out that you had to shop for minimum 400kr in order to proceed to checkout. Then she said, ah then it's not for me. That was so annoying. Then I said yes but maybe you don't need to shop every week, you know, many groceries don't expire that quickly for instance the soda that you always drink ... so there's a lot of motivation work in that way. (resource person)

Proposing alternative routines and trying to persuasively make the older people try out these new services is also part of the 'motivation work', which one resource person calls it. She knows what kinds of groceries this particular woman is interested in, and based on this knowledge, she proposes that the woman changes her shopping habits slightly to make online shopping possible.

Making the possibilities of the technology and digital services come together with the habits, routines, and interests of the older person requires the ability of the resource person to motivate and persuade to small changes in their everyday routines. Other times it is the technology that needs to be evocatively readapted to the older person to 'fit' their needs and interests.

- Inge (older user): 'I simply don't have imagination to see what this thing can be used for!'
- Tabitha (resource person): 'I use it mostly for playing games, there are lot's of funny games'
- Inge: 'That sounds a bit like a waste of time, no I'm not going to get into that, I don't have time for that'
- Tabitha: 'You can listen to music, there is all the music you could imagine'
- Inge: 'I have my stereo rack over there that works fine for me'
- Tabitha: 'You can get e-boks [digital mail from the municipality] and get all you mail from the municipality on the Ipad'
- Inge: 'No, no I said no to all that already. I don't want it, I'm afraid there is something I will miss because I forget to check it, that won't work'.

Evoking the Ipad in ways that appear to the other person as relevant and useful is a difficult task, which requires a good understanding of that person. During the



implementation process, the resource person has to seek to present the technology in relevant ways all along seeking to invent needs for technology that the older person may identify with. More than technical, rational, or systematic process, evocation work is a process of tinkering in the sense to ‘quibble, test, touch, adapt, adjust, pay attention to details and change them’ (Myriam Winance 2015). It means developing a feeling for the other person, a good sense of who they are and what they like. Although the resource person in this quote does not manage to persuade the older person of the usefulness of the Ipad, the example serves to show the practices of readapting and reinventing the technology to fit with different purposes and user needs.

### **Responsibilization: Delegating roles and responsibilities**

A central aspect of the resource person’s work has to do with maintenance or care for the technology. Ideally, it is the responsibility of the older person to take care of the technology, make sure to update it, keep track of cables, keyboards, and codes, charge the technology etc. All though the resource persons do try to remind the older persons to take care of the technology in the necessary ways, this does not always work out. An uncharged Ipad or a missing internet code can severely disrupt an implementation process to great irritation for both the resource persons and the older persons.

I just felt so powerless. The first time I came she could not find the code of her wifi, so we had to order a new one, which would arrive by mail. We had to wait for the next week. When I came back the next week the code had arrived, but she had forgotten where she left it, so we had to order a new one and wait for the next week. Again we wasted a whole session. The third time she finally had the code but we had only three times left to learn how to use the Ipad. (Ressource person)

Some aspects of implementing technology are out of the hands of the resource persons who depend upon the older person to take on certain responsibilities in order to go on. On many occasions, I have witnessed time pass as an Ipad needed to be updated on a slow internet connection, a keyboard or Ipad had not been charged prior to the meeting, or codes and passwords had to be retrieved or reordered. In some cases, there are no problems of delegating responsibility of technology maintenance and care to the older persons, but in other situations, the changed relations of responsibility generate feelings of powerlessness, as one resource persons express it. Re-delegating responsibilities and work result in changes in the structures of dependability and power/-lessness, and sometimes become a showstopper in the implementation process. Resource persons must either spend extra time reminding their clients to do this and that with the technology such as by making phone calls in between meetings to check up and leave reminders. Dealing with the maintenance and care for technology is also part of the implementation, which introduces new relationships of responsibility, power and powerlessness, and care in the relations between the resource persons, the older people, and the technology. Caring through technology implies caring for technology, a work that is not actually a part of the resource person’s job description, but which inevitably becomes it, in situations where there are not others who do the job, or where making other people do the job requires its own work.

## Concluding discussion: Implementation work as affective, symbolic, and mythopoeic

Implementation is a difficult analytical and empirical concept. In design and innovation handbooks, implementation is often reified as a separate phase with its own distinct characteristics, in a linear innovation trajectory. Where the design phase is depicted as innovative and creative, in the sense that this is where the new object is said to be invented, implementation is usually referred to as the process of installation of the new object (Sánchez-Criado et al. 2014), a merely technical process. STS researchers have argued that implementation is a much more complex and diffuse process of tinkering, ‘taming’, and conducting various kinds of skilled articulation work and affective work. This paper has illustrated the skilled practices of project managers and homecare workers working to implement Ipad as a new technology in homecare. Far beyond merely installing an object, a range of different actors need to be reconfigured. Homecare workers need to attain certain roles and beliefs in order to become good implementation agents, and older citizens must adapt their everyday practices and routines to the new technologies and the new relations of responsibility. Project managers and homecare workers work from the tacit presupposition that making implementation happen requires affective attachments between humans and technology. They seek to create attachments through different socially sophisticated strategies, symbolic reward, enchantment, and affective practices. This, for instance, happens when project managers seek to affect the resource persons emotionally through different ways of showing appreciation and pampering. They seek to enchant them through creating fascination with technology and evoking technology as exciting, extraordinary, and inevitable. Those practices remain predominantly unarticulated, implicit, and invisible in the domains where they are practiced and in prevailing policy and innovation discourses. However, the invisibility of such practices erases and obscures the range of skills and strategies necessary in order to facilitate implementation of new technologies in health care. Analyzing this invisible work foregrounds the skillfull work of project managers of creating motivated and dedicated implementation agents, and the delicate strategies of homecare workers to enchant, persuade, and seek to entice older people and technologies to create emotional attachments and adapt to each other. If these practices of rewarding, enchanting, and persuading are central parts of the work of implementing technology, then where does that lead us in terms of understanding the process of implementation as such? STS researchers have described implementation as a social, material, organizational, and affective process, and a process of reconfiguring, taming, and tinkering (Pols & Willems 2011). This study is aligned with those views, as it presents implementation as a process of configuring ‘implementation agents’ and ‘digital older citizens’ through affective, symbolic, and persuasive processes. As such, implementation emerges as an affective and symbolic process. Actors enact symbolic forms of reward, appreciation, and reassurance in order to create affective attachments. However, the paper also identified practices of seeking to create experiences of amazement, fascination, belief in technology, and specific future imaginaries about technology. Practices carried out by project managers seeking to fascinate homecare workers with high tech experiences of using VR technologies, and also carried out by home care workers who seek to ‘open up’ whole new worlds of desire and possibility through technology. These practices were referred to as ‘enchantment’. But what exactly can be understood by such a term, and what does it suggest for the views



on implementation? Anthropologist Alfred Gell argues that the opposition between the technical and the magical is without foundation (Gell 1988). Introducing the notion of enchantment to the sphere of technology, Gell suggests us to view human practices of technology use as being at once instrumental and rational, and also magical and mythopoeic. According to Gell, magical thinking provides the spur to technological development, by inserting commodities in a mythologized universe (Gell 1988, 9). By pointing out, as the paper has done, the practices of enchantment, such as through the creation of technological imaginaries, the paper opens up the notion of implementation as a mythopoeic process. STS researchers have shown how implementation is a complex process of tinkering, taming, and reconfiguring users and technological devices. This paper adds to this body of work, by bringing forth the characteristics of these processes as affective, symbolic, and evocative. Myths, beliefs, and emotions play a vital role in making homecare workers become motivated and dedicated implementation agents. Moreover, the paper suggests that attending to the actual work carried out by actors involved in implementation processes is salient in order to understand what implementation is in practice. Analyzing the subtle and invisible work of implementing technology opens up to understand not simply how a particular technology enters into a specific domain of practice, but how affective and epistemic transformations occur simultaneously.

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